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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/626,457	07/23/2003	Venkata A. Bhagavatula	SP02-165	2551
22928	7590	12/28/2005	EXAMINER	
CORNING INCORPORATED			KIANNI, KAVEH C	
SP-TI-3-1			ART UNIT	
CORNING, NY 14831			PAPER NUMBER	
			2883	

DATE MAILED: 12/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/626,457	Applicant(s) BHAGAVATULA ET AL.	
	Examiner Kianni C. Kaveh	Art Unit 2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 20 and 22-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 20 and 22-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicant's canceling of claims 1-19 and 21 in the amendment/response submitted on 10/11/05 is acknowledged.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 20, and 22-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenner et al., U. S. Patent 6,385,382.



Regarding independent claims 20 and 28, Jenner et al. teach a method for passively aligning and an apparatus for aligning optical elements comprising:

Aligning and securing (col 3, lines 28-30 and col 4, lines 5-7 since the fiber is bonded to the base) one or more optical elements (Fig 1, ref sign 104) to bases (Fig 1) using one or more first flexible gripping elements on the bases (as shown in fig.1, above items flexible elements first 122; see also detailed description, 8th parag.); and securing and passively aligning (col 3, lines 39-42 and Fig 1, ref sign 116) one or more of the bases to a substrate (Fig 1, ref sign 10) using one or more second flexible gripping elements

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on the substrate (as shown in fig.1, above items second flexible gripping elements 122 aligning bases on substrate; also see detailed description, 8th parag.); each base has a first receiving structure (Fig 1, ref sign 112) configured to secure an optical element to the base as described above; and the substrate has one or more second receiving structures at predetermined locations configured to secure and passively align one or more of the bases to the substrate (col 3, lines 39-42).

In this reference, the base is interpreted to be the structure the fiber is mounted/bonded into and the substrate is the optical bench the base is mounted to. In addition, passive alignment occurs because of the alignment features (Fig 1, ref sign 116) in the base mating with oppositely gendered alignment features in the bench as referenced above. As seen best in Figure 5, the shape of the alignment features lends itself to securing the base to the substrate.

Regarding independent claim 38, Jenner et al. teach a method of passively aligning and an optical device comprising:

An optical element (Fig 1, ref sign 104);

A base (Fig 1) having a first receiving structure (Fig 1, ref sign 112) configured to secure the optical element to the base (col 3, lines 28-30, col 4, lines 5-7) and a substrate, (Fig 1, ref sign 10) having a second receiving structure at predetermined locations configured to secure and passively align the base to the substrate (col 3, lines 39-42).

However, the reference is silent with respect to plural optical elements, plural bases and a plurality of second receiving structures.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to include a plurality of optical elements, bases and a plurality of second receiving structures since it has been upheld that mere duplication of the essential working parts in a device involves only routine skill in the art (St Regis Paper v Bemis Co., 193 USPQ 8.).

The motivation for including a plurality of optical elements, bases and second receiving structure is to provide for system redundancy or to simultaneously align more than one set of components.

Regarding claims 22 and 31, wherein the first flexible gripping elements has a pair of spaced sidewalls defining a channel for receiving the optical element and securing optical element to the base (shown in above Fig 1, items sidewalls of the gripping elements).

Regarding claim 23 and 32, the second flexible gripping elements has a pair of spaced sidewalls defining a channel for receiving the base (as shown in fig. 1, items second flex grippers defining channel for receiving the base). The channel would be the space between the opposite-gendered receiving walls of gripping elements.

Regarding claims 24-25, 27, 36 and 37, each base is sized and shaped to cooperate with the receiving second flexible gripping element to secure the base to the substrate (shown in above fig. 1, also col 3, lines 39-41). The bases are sized and shaped to be interchangeable and the first and second flexible gripping elements and

bases have predetermined and standardized sizes since they are designed to fit together as described above.

Regarding claims 26 and 35, wherein securing and passively aligning one or more of the bases comprises disposing at least a portion of the base in a depression or recess in the substrate (shown in above Fig. 1, items bases in a recess/depr. of subst.).

Regarding claim 29, the first flexible gripping element secures the optical element to the base at a predetermined spatial and angular position since the fiber is bonded to the base as described/shown above.

Regarding claim 30, the first flexible gripping element aligns the optical element to the base (as discussed/shown above Fig 1).

Regarding claim 33 (page 4), the sidewalls include upper and lower portions and spacing between the upper portions is less than the spacing between the lower portions (col 4, lines 54-65 since the base is squeezed).

Regarding claims 34 (page 5) and 34, the base includes an alignment feature (Fig 1, ref sign 116), which cooperates with an alignment feature on the second flexible gripping element thereby securing the base to the substrate. The alignment feature includes a groove (as shown in above Fig , 1 and as discussed above; slots at bottom of base, fig. 5).

Regarding claim 39-40, the arguments presented in rejection of claim 20 and its dependent claims, above, are analogous in rejection of these claims including wherein the optical element can be selected form the group consisting of optical fibers, lensed fibers, prisms, filters, thin film filters, switching elements, lenses, graded index lenses,

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gratings, mirrors, MEMs mirrors, electroholographic switches, VCEL arrays, variable optical attenuation elements, tunable filters and LCD switches (Fig 1, ref sign 104 where 104 is a fiber).

Further Citation of Relevant Prior Art Prior art made of record and not relied upon is considered pertinent to applicant's disclosure. In accordance with MPEP 707.05 the following references are pertinent in rejection of this application since they provide substantially the same information disclosure as this patent does. These references are:

*Caracci et al. UIS 6928226 and US 20030175000 teach at least claims 20 and 39
Verdiell et al. 6886993*

These references are cited herein to show the relevance of the apparatus/methods taught within these references as prior art.

Response to Arguments and Amendment

Applicant's argument filed on 10/11/05 have been fully considered but they are not persuasive.

Applicant asserts (page 4, last parag.-page 8) that Jenner does not teach securing the base to the optical bench using flexible gripping elements. Examiner responds that although the above underlined limitation is not in the claim, nevertheless the bench being a substrate, as shown in above Fig. 1, and discussed above all such limitations are taught by Jenner.

The Examiner kindly advises the applicant to appropriately narrow the scope of the invention in order to allow the case.

THIS ACTION IS MADE FINAL

This action in response to applicant's amendment made FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kianni C. Kaveh whose telephone number is 571-272-2417. The examiner can normally be reached on 9:30-19:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

K. Cyrus Kianni
Primary Patent Examiner
Group Art Unit 2883

KAVEH KIANNI
PRIMARY EXAMINER

December 20, 2005

A handwritten signature in black ink, appearing to be 'K. Kianni', with a long horizontal line extending to the right.